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# THE Agricultural Situation

AUGUST 1950

Volume 34 Number 8

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[ The AGRICULTURAL SITUATION is sent free to crop and price reporters in connection with their reporting work ]

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A monthly publication of the Bureau of Agricultural Economics, United States Department of Agriculture, Washington, D. C. The printing of this publication has been approved by the Director of the Budget (February 4, 1949). Single copy 5 cents, subscription price 50 cents a year, foreign 70 cents, payable in cash or money order to the Superintendent of Documents, Government Printing Office, Washington 25, D. C.

## Here's Satisfying Reading:

# Crops Look Good at Midyear

CURRENT CROP prospects make a satisfying reading. True, acreage allotments for important crops this year are helping hold total crop production below the surplus-forming volumes of 1948 and 1949. But output of all crops in 1950, the Crop Reporting Board forecasts, may be larger than in 5 of the past 8 years.

To put current prospects into dry statistics: On July 1 the 1950 output was expected to be 24 percent larger than the average of 1923-32, or pre-drought period. In other words, this year the Crop Reporting Board's Index of all crop production is 124 percent. Last year, the index was 132 percent, in 1948 it was 138 percent, and in 1946, 126 percent; but in the other 5 of the past 8 years the index ranged from 116 to 123 percent.

We had heard that the 1950 spring season was backward, that the winter wheat crop was ruined by drought and greenbugs, that farmers couldn't get their grains seeded and couldn't cultivate their row crops because of wet fields. Those factors existed, but only in parts of this wide country's fields. Furthermore, it's never wise to discount the abilities of American farmers. They'll get the job done if they have to run their tractors 24 hours a day for days at a time.

### Some Major Shifts

Despite the difficulties this spring, farmers managed to plant a million acres more of the 17 crops covered in the March Prospective Acreage report than they had intended then. This involved some major shifts. Because of wet fields, farmers found it impractical to seed nearly 1½ million acres of the durum and other spring wheat acreage, about 900,000 acres of the oats acreage and 700,000 acres of the barley acreage that they had planned to seed last March. But they seeded about as much flax as planned, nearly 1½ million more acres of corn, a million more acres of soybeans, over a million more acres of

sorghums and 600,000 more acres of hay crops than had been intended in March.

### Acreage Below 1949

For the 52 principal crops covered by Crop Reporting Board estimates, the total acreage upon which these crops were seeded or growing amounted to 357 million acres. This is less than in any of the past 7 years, except in 1946; and nearly 13 million acres less than last year. The drop from 1949 is due largely to acreage allotments on cotton, wheat, corn, peanuts, tobacco, potatoes, rice, and dry beans. Acreage losses are expected to be relatively heavy—up to 17½ million acres. Much of this is accounted for by abandonment of winter wheat. So only 339 million acres will be harvested, less than in any year since 1941 and 17 million acres less than in 1949.

Why then, is total production likely to exceed production in most years of the last decade? Well, according to what thousands of farmers reported to the Crop Reporting Board, crop prospects are better than average. They add up to nearly 3.2 billion bushels of corn, fourth largest crop in history, about 1.4 billion bushels of oats and 265 million bushels of barley, both larger crops than last year, and the probability of as much sorghum grain as last year. These four feed grains

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*One of the aims of the Department of Agriculture is to have ready, at all times, information on the past, present, and future output of the farms of the country. To accomplish this the Crop Reporting Board is called upon to make estimates, and this Board in turn calls upon those who know—the farmers—for the basic information. So at any time, and particularly at a time like the present—blessed be those farmers who voluntarily furnish the necessary and basic information.*

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usually account for about one-third of the total crop production. Hay will stack up to 103½ million tons, enough to replenish supplies in all the areas where stocks were depleted.

Food grains, however, will make up their smallest total in 7 years. We will produce less than a billion bushels of wheat for the first time since 1943, very small rye and buckwheat crops, and about one-eighth less rice than last year.

As for the oilseeds, the leading crop—soybeans—is likely to be a record be-

cause of the record acreage this year. But the acreage producing cottonseed is only about two-thirds as large as last year, the flaxseed output is estimated at 29 million bushels, only two-thirds of last year, and peanuts may amount to about 750,000 tons, about four-fifths of the 1949 outturn. The increase in soybean tonnage may be about half as large as the decrease in the other three oilseeds.

Tobacco production of nearly 2 billion pounds will nearly equal that of last year. The acreage of potatoes is

## The Mid-Year Crop Production Outlook

[Figures in thousands]

Crops	Unit	Average 1939-48	1949	Indicated 1950
Corn, all	Bushels	2,900,932	3,377,700	3,175,602
Wheat, all	do	1,031,312	1,146,463	956,586
Winter	do	758,821	901,668	720,545
All spring	do	272,491	244,795	236,041
Durum	do	36,753	38,864	30,663
Other spring	do	235,738	205,931	205,408
Oats	do	1,274,474	1,322,924	1,394,772
Barley	do	319,668	233,104	264,726
Rye	do	32,155	18,697	21,391
Flaxseed	do	34,752	43,664	29,338
Rice	100 lb. bag	29,790	40,113	35,201
Hay:				
All	Ton	100,344	99,305	103,498
Wild	do	12,064	12,296	12,165
Alfalfa	do	32,775	38,546	39,376
Clover and timothy	do	29,804	21,657	28,580
Lespedeza	do	6,425	8,571	7,657
Beans, dry edible	100 lb. bag	17,367	21,554	17,186
Peas, dry field	do	5,800	3,267	2,817
Potatoes	Bushel	403,284	401,962	390,431
Sweetpotatoes	do	61,786	54,232	57,892
Tobacco	Pound	1,777,945	1,970,376	1,932,146
Sugarcane for sugar & seed	Ton	5,915	6,796	7,597
Sugar beets	do	9,938	10,197	12,526
Hops	Pound	45,816	50,730	53,112
Apples, commercial crop	Bushel	109,408	133,742	119,180
Peaches	do	70,090	74,818	55,512
Pears	do	30,295	36,404	28,488
Grapes	Ton	2,777	2,662	2,748
Cherries (12 States)	do	179	259	225
Apricots (3 States)	do	234	198	203

## Citrus Fruit Production (Thousand Boxes)

	Average 1938-47	1948	Indicated 1949
Oranges and tangerines	97,123	104,120	108,195
Grapefruit	50,528	45,530	36,630
Lemons	13,164	10,010	10,400

the smallest since 1876, but production is estimated at 390 million bushels, nearly as much as last year. An upturn in sweetpotato acreage will yield a crop of 58 million bushels, nearly up to average. About an average crop of dry beans is foreseen—17 million bags; but the 2.8 million bags of dry peas is about half the average. Prospects for deciduous fruits, as a whole, are below average. The outlook is poorest for peaches, prunes, and apricots. The 7.6 million tons of sugarcane and 12.5 million tons of sugar beets are each well above average crops and larger than last year.

Cotton farmers observed acreage allotments so carefully that only about 88 percent of the total allotted acreage was planted. The crop has prospered under favorable planting and growing conditions, but weevils are a far more serious menace than usual.

Corn producers in the commercial corn area observed their allotments fairly well, but those in other areas where there were no allotments increased their acreage. The total acreage for harvest is the smallest since 1894, but only about 4.2 percent less than in 1949. The acreage allotments

sought a reduction of about 20 percent in the commercial area, which would be equivalent to nearly 13 percent below the 1949 planted acreage for the entire country.

The 71,525,000 acres of all wheat sown is about 16 percent less than for the 1949 crop; and is less than the total allotment—about 73 million acres. For rice, the 1,623,000 acres sown is about 2 percent above allotments in the four States for which estimates are made. For tobacco, allotments did not apply to all types, and for beans not all varieties are covered. For potatoes, allotments apply only to commercial growers—those producing three acres or more. For peanuts, growers were permitted to grow nuts for oil in addition to acreage allotted for edible uses. But in all these cases where comparisons are unavailable, growers tended to keep their plantings pretty well in line with allotted acreages.

We need not fear lack of any essential farm product; on the other hand, barring an emergency, the specter of surpluses still lurks in the background.

Charles E. Burkhead  
*Bureau of Agricultural Economics*

## Like Hybrids Better Than Ever

CORN GROWERS apparently like hybrids better than ever, in spite of the fact that only 77.1 percent of the total acreage is in hybrids this year, compared with 77.6 percent last year.

This slight decline in the share of the total corn acreage planted to hybrids is of interest only because it is the first on record. In 1933, a little more than 1 acre in 1,000 was in hybrids. Last year

and this year, hybrids were planted on more than 3 acres out of every 4.

Here's what happened: Colorado is the only State where there was much reduction in the share of the corn acreage planted to hybrids. In Nebraska and Mississippi, there was a very slight decrease—but in all the other States it held steady or increased. The following table summarizes the picture.

Region	Total corn acreage change 1949 to 1950	Percent in hybrids	
		1949	1950
East North Central	Down 1,987,000	97.8	97.9
West North Central	Down 3,160,000	92.0	92.1
Mountain and Pacific	Down 27,000	48.7	46.7
South Central	Up 1,047,000	44.3	47.2
South Atlantic	Up 339,000	33.1	36.2
Middle Atlantic and New England	Up 29,000	83.9	86.3
United States	Down 3,759,000	77.6	77.1

# *The Food Outlook:*

## Supplies Plentiful, Demand Strong

**S**UPPLIES of food in the United States this year are large enough to maintain the civilian food consumption rate per person at the same level as in 1948 and 1949, even allowing for some increase in military procurement of food in the remaining months of 1950.

Production of food this year is expected to total about the same as in 1949, 38 percent above the 1935-39 average and 20 percent above 1941. Stocks of most foods which can be stored are fairly substantial. In addition, food exports from this country thus far in 1950 have been, and are expected to continue, smaller than during the past few years. On the basis of these supply estimates, civilian consumption of food per person this year is expected to average 11 percent higher than for 1935-39 and somewhat above the 1941 rate, the record year before World War II.

### Demand Strengthens

Consumer demand for food rose this spring and summer as economic activity increased and expanded both employment and consumer incomes. The principal effect of the Korean situation on the food outlook for the remainder of 1950 is likely to be some strengthening of consumer demand as employment and consumer incomes continue to increase as a result of the accelerated defense program.

Through the first half of 1950, military procurement of most foods for troop use and feeding of the civilians in occupied areas was at a lower level than in the same months last year. Although some mobilization will take place, purchases by the military agencies are not expected to have a substantial effect on the overall demand for food this year.

Food exports, which were at record levels in recent years, will be somewhat smaller in 1950. As in the past few years, most of the food exported will be grains and grain products. The decline in the export demand results

from increased food production in both importing countries and other surplus food producing countries.

Prospects for stronger consumer and military demand point to slightly higher retail prices. The speculative buying and price increases in food since the Korean conflict began are similar to those occurring in 1939 after war began in Europe. In that year, the buying receded and prices declined as soon as consumers realized that food supplies were adequate. Food supplies in general are large enough that there is no prospect of shortages in coming months.

### Plenty of Grain

Supplies of most livestock products are about as favorable as last year and somewhat better than in the years before the World War II. Although both the wheat and corn crops this year are currently estimated to be about 200 million bushels smaller than those of 1949, stocks are very large and supplies of cereal food products for the coming year will be plentiful. Large supplies will also be available for livestock feed and for export.

Fruit crops will be smaller this year than in 1949, particularly citrus, peaches and pears. However, fairly large stocks of processed fruits and vegetables are available from the 1949 pack and the output in 1950 probably will be about equal to that of last year.

### Shifts in Some Foods

While the general level of food consumption per person this year is expected to continue about the same as in 1949, some shifts are anticipated in the quantities of the individual foods consumed. For the year as a whole, there may be some increase in the consumption of pork, poultry and eggs, frozen vegetables, sweetpotatoes, vegetable oil products and sugar. On the other hand, the consumption of beef and veal, fresh fruits and butter may be slightly lower.

The increase in overall food consumption per person from the 1935-39 average level results principally from higher consumption of livestock products other than butter, processed fruits and vegetables, and vegetable oils. Increases for these commodities have more than offset lower consumption rates for potatoes and sweetpotatoes, fresh fruits, wheat and rye flour, and corn meal.

### Higher Than in 1941

Compared with 1941, the record pre-war year, food consumption per person in 1950 is expected to average slightly higher because of minor increases for dairy products and food fats and oils other than butter, and substantial increases in the consumption of poultry and eggs, canned and frozen fruit juices, and frozen fruits and vegetables. Average rates of consumption of the following foods may be lower than in 1941: fresh fruits, potatoes and sweetpotatoes, canned fish, sugar, wheat flour, and corn meal.

The rate of food consumption per person is somewhat lower than at the end of the war, chiefly because of declines in the consumption of fluid milk and cream, ice cream, meats, and fresh and processed fruits and vegetables. With feed supplies plentiful, however, hogs could be fed to heavier weights than those at which they have been marketed in the past year and the pro-

duction of grain-fed beef increased. The number of cattle on feed on July 1 in 11 Corn Belt States was 34 percent greater than a year earlier. Larger supplies of fluid milk could be marketed if the consumer demand increases by diverting milk from the manufacture of dairy products that are in surplus. Likewise, the production of some canned fruits and vegetables could still be increased to meet stronger demand.

### About Same as in 1949

On the basis of present estimates of food supplies and consumer demand, the average of retail food prices for this year is not expected to differ significantly from the 1949 average. In the first 5 months of 1950 the index of retail food prices in 56 large cities averaged almost 3 percent lower than for the same period last year, according to the Bureau of Labor Statistics. All commodities groups, except beverages and sugar, averaged lower than in early 1949. The index reached its lowest point of the year in February but with increases in prices of meats, food fats and oils, and fresh and dried vegetables this spring, it was up about 3 percent by May. Prices rose still more in June and July. In view of prospective food supplies, retail prices in the remainder of 1950 are not likely to go more than 3 to 4 percent above the July level.

Harry Sherr  
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## Progress and Problems Mark

# The Search for Defoliants

THE SEARCH for chemical defoliants that will do a good job of removing cotton leaves has been going on for more than a decade. A lot of headway has been made. This year, half a dozen tested defoliants are on the market and farmers will be able to get more information than before on ways of using them for best results.

The key role defoliation plays in the mechanized harvest of cotton is the chief reason for the search. In most years, cotton is ready for harvest before the leaves drop naturally. The earlier it is picked after this time the higher the grade—and the higher the price to the farmer—is likely to be. However, neither of the two types of cotton harvesting machines—the stripper or the picker—can do a good job while the leaves are on the plants.

Studies made by BAE and the agricultural experiment stations of cotton-producing States have shown that costs of harvesting cotton by machine compare favorably with hand harvesting. It also has been found that machine harvested cotton usually grades lower than hand harvested cotton. If this difference in grade could be eliminated, much more widespread use of harvesting machines probably would result.

### Needed Most for Stripper

The need for defoliation is greater for the stripper than the picker. The stripper, which pulls the bolls from the plants, cannot be used in fields in which there is any significant quantity of leaves. Studies in Texas show that in the absence of defoliation it usually is necessary to wait until at least 2 weeks after frost before machines can get into the field. This wait, of course, greatly increases the possibility of loss of grade from weather damage. If defoliants are used and are only partly successful, grade losses from trash or leaf stain are likely.

The report on one of the studies in Texas concludes: "If a practical method of defoliation were perfected, mechani-

cal stripping would become the common method of harvesting on the High Plains." Similar conclusions have been reached in other studies.

The picker, which removes the lint and seed from the bolls, may often operate in fields which have not been defoliated but at reduced efficiency. The leaves will prevent the spindles from contacting some of the bolls, thus leaving cotton in the field. Loss of grade is likely from stain and trash.

### How Much Can be Left

Complete removal of leaves is, of course, the ideal condition for machine harvesting. The amount of leaves that can be left in the field without resulting in loss of grade depends on the condition of the remaining leaves and the type of machine used.

According to results of recent experiments, the cotton picker can operate without significant loss of grade to the lint if about a tenth of the leaves are left on the plants and they are tough and not too brittle. The proportion of leaves can be a little higher with the stripper which generally is used for shorter cotton which can stand rougher treatment at the gin. Ninety percent is good for the stripper while 80 percent is acceptable.

Defoliation offers some other benefits. When leaf growth is unusually rank, removal of the leaves allows the sun and air to reach lower bolls. This speeds up the opening and drying of fiber in mature bolls, helps prevent boll rot and may make it possible to harvest the whole crop in a single time over the field. Defoliation has proved particularly valuable in seasons when used ahead of a hard freeze. Frost will cause defoliation but after a freeze the leaves die and cling to the plant, making machine harvesting difficult. Recent experiments indicate that the grade and germination of cotton seed may be improved by defoliation.

Defoliation also has been found useful in insect control, particularly for

boll weevils, the pink bollworm, and leaf aphids or leafworms.

Many of the benefits of defoliation also apply to hand harvesting. In fact, work on defoliation was begun before a practical cotton-harvesting machine was developed.

According to a research progress report, "Chemical Defoliation of Cotton," prepared by the Defoliation Conference Steering Committee and published by the National Cotton Council, six defoliants will be on the market this year. They include two dusts, calcium cyanamide and mono-sodium cyanamide, and the following sprays: ammonium thiocyanate, sodium chloride-sodium pentaborate, sodium monochloracetate and potassium cyanate.

### Defoliants for Arid Areas

The first, calcium cyanamide, has been used for several years and was the only defoliant farmers could buy until 1948. Its chief shortcoming arises from the fact that the leaves must be wet for at least 2 hours after it is applied. This limits its effective use to more humid areas where dew is frequent and humidity high.

The other five defoliants are better adapted to arid areas. They do not depend on dew and all except mono-sodium cyanamide are effective when the humidity is low. Detailed instructions about the rates at which defoliants should be applied, the time to apply them and the areas to which they are adapted is included in the Defoliation Conference's report. It summarizes the results of research on cotton defoliation being carried on by the Bureau of Plant Industry, State agricultural experiment stations, State colleges, and private groups.

The efficiency of defoliation has been found to depend not only on the chemical used but on the condition of the cotton plant. For best results, the chemicals must be applied when the plants are active and most of the leaves are mature. These requirements make proper timing difficult.

Cotton plants become inactive, or dormant, most frequently as the result of drought or cold weather. When they are in this state, defoliation is

difficult and sometimes impossible. Sometimes heavier applications of a defoliant will remove the leaves but frequently this results in slow or partial defoliation. Plant inactivity is one of the conditions that limits the effectiveness of defoliants though future research may find ways to overcome it.

The degree of maturity of the cotton plant also limits the time when defoliants can be applied effectively. Mature leaves defoliate easily while new leaves or second growth leaves are hard to remove. In addition, the degree of maturity of the bolls must be taken into account. Defoliation, by cutting off the supply of food from the leaves, interferes with the growth of the bolls. If a defoliant is applied when a high percentage of the bolls are immature, losses in yield and quality of the lint and seed may be substantial.

In most of the nonirrigated areas of the Cotton Belt, plants usually come to a point where growth slows down or stops rather abruptly. Losses from immature bolls usually will be at a minimum if defoliants are applied when the youngest bolls are 25 to 30 days old.

Where plants tend to set new bolls and grow new leaves into the fall, timing is more difficult. Growers may have to go ahead and defoliate before bad weather sets in, thus sacrificing yield and quality of late bolls.

### The Second Growth Problem

A third problem of timing that has proved one of the most difficult is that of second growth. Most varieties of cotton can make second growth and none of the defoliants available will do a good job of removing these leaves until they have matured. Chemical defoliants may be developed that will be effective against second growth leaves. However, it may be that the answer will be found in cultural practices that will bring the plants to maturity at the proper time for defoliation.

Despite the problems that remain, the advances made in cotton defoliation have been substantial. They hold out the promise that the day is not too far off when defoliation will be the standard practice throughout the cotton-growing region.

# New REA Telephone Program Gets Underway

A SERIOUS need for credit to finance rural telephone systems has existed for many years. As a result, farmers and rural people in general have not had adequate telephone service.

Until the amendment to the Rural Electrification Act providing for a rural telephone loan program similar to that which existed for rural electrification, there was no particular attempt to meet the widespread need that existed. The new rural telephone loan program provides for the financing of the improvement and extension of rural telephone systems to serve farmers and other rural people outside of villages and towns of more than 1,500 population. Loans are made at 2-percent interest for a maximum of 35 years.

## Service Often Poor

The size of the job to be accomplished by this program is indicated by the fact that only 40 percent of the farmers of this country had telephones in 1949, according to estimates of the Bureau of Agricultural Economics. And the service received by many of those who had telephones was of very poor quality. The failure of existing telephone companies to provide adequate rural service and the lack of interest on the part of private credit institutions in making telephone loans resulted in the need for establishing a source of low-cost, long-term credit for this purpose.

The new rural telephone program is entirely a loan program. REA will not go into the telephone business and will not build or operate any telephone systems. As has been the case in rural electrification for more than 15 years, the function of REA will be to make self-liquidating loans to telephone companies and cooperatives for the purpose of financing high-quality telephone service.

A basic principle of this program

will be to make loans to companies and cooperatives that agree to serve everybody within their service areas who wants telephone service. This is known as the "area coverage" principle. The program will involve the rebuilding of many existing rural systems and the construction of new facilities to serve those rural areas that do not have any type of service at present.

## Farmers Need Phones

Although the cost of satisfactory service may be somewhat higher than has previously been paid for low-quality service, there is reason to believe that farmers cannot afford to be without dependable telephone service. A good telephone can eliminate the necessity for many trips to town when machine repairs are needed, when crops are ready for the market, when the doctor is needed, and when other needs require immediate contact with professional and business people.

The interest in the new telephone program has been widespread. During the past 8 months, more than 2,500 inquiries concerning the program have been received from farmers and telephone companies in 44 States. By June 30, 1950, 486 loan applications had been received. Small rural telephone companies and farmer-owned mutual companies are showing an active interest in providing farmers with the type of telephone service that will meet the existing needs.

By June 30, 1950, a total of 17 loan allocations were made. The purpose of these loans is to improve service to 6,989 existing subscribers and to finance the construction of additional lines to serve 9,848 new subscribers.

The progress of the program to date has been retarded by the lack of technically trained telephone personnel and the many problems that arise in setting up a Nation-wide loan program on a sound business basis. As addi-

tional personnel are trained, it is hoped that ways and means will be found to provide telephone service to all rural people that can be served on a financially sound basis.

Farmers and other rural people who want telephone service should make their needs known to the nearest telephone company or cooperative. They can suggest that loans are available for the financing of rural lines. Cooperatives, farm organization leaders, rural electric cooperatives, and others are available to assist in contacting the existing telephone companies. If existing companies are not interested in extending service on an area coverage basis, it may be desirable to set up a new organization to do the job. REA

will assist rural people in planning and organizing their telephone systems as rapidly as possible. In the meantime, rural leaders and community groups can obtain the following publications for their guidance in discussing and planning their telephone systems:

(1) A Telephone for Your Farm—PA-83 USDA (May 1950).

(2) Pre-Loan Procedure for Rural Telephone Cooperatives Form AL-T-2 (1-50).

(3) The Rural Telephone Loan Program—PA-83 USDA (Dec. 1949).

These publications may be obtained free by request to the Information Services Division, Rural Electrification Administration, Washington 25, D. C.

E. C. Weitzell  
*Rural Electrification Administration*

## *A Brief Look at Korean Agriculture*

KOREA ALWAYS has been chiefly an agricultural country. About three out of every four Koreans are engaged in farming, and agricultural output accounts for about three-fourths of the value of all production.

The major part of agricultural output comes from South Korea which produces rice and other grains, and is relatively rich in foods but relatively poor in minerals and industries. Rice is Korea's most important crop. In the 1940-44 period, 71 percent of the crop was produced in what is now South Korea.

Industry is centered largely in North Korea where there are mineral deposits and well - developed hydroelectric plants. South Korean agriculture depended upon the northern part of the country for chemical fertilizer before the partition of Korea along the 38th parallel. When the partition cut off this supply South Korea was compelled to depend on imported fertilizer. Fertilizer imports by the end of 1949 came mostly from the United States.

Despite the importance of agriculture in Korean economy, only about one-fifth of the total area is farmland, the remainder being too mountainous for cultivation. Farms usually are no more than 3 acres per family. Farm imple-

ments are crude and livestock is scarce. Average diets contain some fish but practically no meat.

Climate, terrain and population necessitate intensified farming, especially in South Korea. This requires both irrigation and heavy use of natural and commercial fertilizer. About one-third of the irrigated area normally is double-cropped, producing rice in summer and fall, and barley, wheat, or rye in winter and spring. Three-quarters of Korea's entire cultivated area usually is planted to cereals which provide 80 percent of the population's caloric intake. The remaining area is devoted to soybeans, vegetables, fruits, fibers and tobacco.

South Korea does not import or export agricultural products in any sizable quantity. While warfare continues, such Korean foreign trade as has existed undoubtedly will be curtailed. The number of good seaports in Korea is hardly adequate for military needs and it must be assumed that military shipments will take precedence over civilian goods. Therefore, fertilizer supplies again will be short for the rest of the crop year. The fighting in Korea in itself probably will not appreciably increase the immediate need for agricultural imports.

# Life Span of Average Tractor Nearly Two Decades

THE AVERAGE life of the farm tractor has increased about 50 percent during the last decade. According to information received from crop correspondents of BAE, an average use of 19 to 20 years was indicated for factory-made wheel tractors on farms January 1, 1948.

About 96 percent of the wheel tractors bought in 1938 were still on farms on January 1, 1948. Forty-four percent of the 1928 tractors and only about 4 percent of the 1920 tractors were estimated to be on farms at that time. Factory-made wheel tractors accounted for about 90 percent of all tractors on farms January 1, 1948.

## Use Old Tractors

Two factors were most important in the increase in tractor life in recent years. During the war, many farmers who were faced with high wage rates and high feed prices switched from animal to tractor power. The supply of new tractors was insufficient to meet the tremendous demand and many farmers had to buy reconditioned used tractors. Many used tractors in dealers' hands January 1, 1942, that were to be junked, were reconditioned and sold to farmers.

The second factor is that tractors have become obsolete more slowly. Although there have been many changes and improvements in tractor design and performance during the past 2 decades, they were substantially less than in the decade which ended in 1930.

## Tractors Used More

Life of farm tractors has increased despite a marked increase in annual use. In 1930 all farm tractors, of which the great bulk were wheel tractors, were used an average of 400 hours a year. Wheel tractors were used an average

of 488 hours in 1940 and 634 hours in 1947.

Annual use of tractors varies widely with the tractor age. In 1947 wheel tractors 10 years of age and less were used 676 hours, the 11 to 20 year old tractors 570 hours and those over 20 years old an average of 270 hours.

Many of the old tractors are on small farms that have but one tractor. However, many operators of medium and large size farms have more than one tractor and use the old tractor only for extra power during the rush season or for specific jobs.

## Tractor Life May Lengthen

Where there is but little work to be done, old tractors often provide power at a relatively low cost. Under normal conditions the market value of a tractor at the end of about 10 years, is not greatly different from the trade-in value at a still later period. Thus, depreciation costs of old machines are small.

Although the life of the tractor has increased markedly during the past decade, it may increase somewhat further in the years ahead. Practically all of the wheel tractors now on farms are equipped with rubber tires and the great bulk of them were designed for row crop work. Tires reduce vibration which in turn reduces tractor wear and increases tractor life. Also, it is believed that during the past several decades life of the all-purpose tractor has been somewhat greater than that of other wheel tractors. Furthermore, since 1940, the percentage increase in tractor numbers on small farms has been greater than that for large farms. Annual use of machines on the small farms is less and average life greater than on the large farms.

A. P. Brodell  
A. R. Kendall  
*Bureau of Agricultural Economics*

# Longer Farmers Have Electricity, the More They Use

THE NETWORK of power lines spreading through the rural areas of the country have brought central station electric service to about 85 farmers out of every 100. Not only are more farms electrified than ever before, but farmers are steadily increasing the amount of electricity they use.

Considerable information on the ways farmers use electricity is being obtained from a series of surveys by the Bureau of Agricultural Economics and State agricultural experiment stations. Surveys have been finished in Washington, Iowa, and Georgia. Other studies are in progress in Kansas, Tennessee, eastern Washington, and north central North Dakota.

Results of these surveys will provide a basis for estimating future use of electricity for the various types of farms and the different agricultural areas, and will show ways electricity can be used on the farm to cut costs and increase efficiency of production. The surveys were financed under the Research and Marketing Act.

The three surveys completed so far indicate that the amount of electricity used on farms in a given area depends mainly on the length of time farms have been electrified, the size of the farm income and the size of the farm enterprise.

## Big Gain in Consumption

Generally, the longer a farmer has had electricity, the more he is likely to use. The surveys show that farmers continue to increase their use of electricity, even after 30 or more years of service. From 1938 to 1947, consumption increased almost 4 times in Washington, 2½ times in Iowa, and about doubled in Georgia.

Although farmers value electric lights more than any other type of electrical equipment, lighting accounted for very little of the increase in the use of electricity in the 1938-47 decade. Most of it is due to new equipment bought by farmers.

The proportion of farmers with electric ranges, refrigerators and water heaters—three of the heaviest users of electricity—increased rapidly in recent years. For example, in the Iowa survey the proportion of electrified farms with electric ranges rose from about 4 to 27 from 1938 to 1948; the percentage with refrigerators from 30 to 80 percent and the percentage with water heaters from around 4 to 23. None of the farms had food freezers in 1938 while a tenth had had them in 1948. About half of the Iowa farms had pressure water systems in 1948 compared with a fourth in the prewar year.

## Household Uses Largest

The 3 surveys indicate that the radio and flatiron are found on nearly every farm with electric service. Other small appliances such as electric clocks, toasters, and vacuum cleaners are found on most farms. The proportion of farms with electric washing machines varies a great deal by areas. Ninety percent of farms surveyed in Iowa and Washington, for example, had electric washing machines compared with only a third in Georgia.

Electrical household equipment accounts for the bulk of the electricity used on farms, the surveys indicate. Household uses accounted for 90 percent of all electricity used on farms in the Georgia area, 80 percent in Iowa and 65 percent in Washington.

However, use of electricity for farming also is increasing and the number of milking machines and electrically powered shop tools rose rapidly in the 1938-47 decade. Electric power also was used occasionally for elevating grain, cleaning seed, shelling corn and grinding feed. Electricity was more widely used on dairy and poultry farms than other types of enterprises.

While practically all farms surveyed so far have a radio and a flat-iron, the amount of other types of equipment and the quantity of electricity used was associated closely with the size of farm income.

Among Iowa farms that had been electrified for 5 years or more, an increase of \$1,000 in total income was associated with an average increase of about 118 kilowatt-hours used during the year. In the Georgia area, the same increase in total income was associated with an average increase of 190 kilowatt-hours on farms that had received service 3 years or more.

Higher income, of course, is not the sole cause of increased consumption of electricity. However, the high income farms were larger business and had more need for electrical equipment in farming operations. They had more dwellings per farm and so had more need for electrical household equipment. As a rule, buildings on the farms were larger and had more need for lighting and other services. During the 1938-47 decade, farmers with high incomes tended to increase use of electricity compared with farmers with lower incomes.

Despite the tendency for higher income farms to use more power, there was considerable variation in the amount of electricity used by farms at any one income level. Among Iowa farms which had electricity for 5 years or more and had a total income of \$25,000 and over in 1947, use of electricity ranged from 500 to 16,000 kilowatt hours. In the group with less than \$2,500 total income the range was from 200 to 2,600 kilowatt hours.

The 3 surveys indicate that average consumption of electricity per farm in each area is likely to continue to rise during the next 10 years and may easily be 2 to 2½ times what it was in 1947. Farmers desire all kinds of equipment that will reduce production costs and will make family living more pleasant. Many of the young people now on farms consider many kinds of electrical equipment as necessities rather than luxuries.

While many kinds of electrical equipment will be installed in the future, much of the electric power will go to operate a few kinds of equipment. In Iowa, for example, it is believed that 5 kinds of equipment—refrigerators, ranges, water heaters, freezer cabinets and air conditioning units—may take about half of all electricity used on these farms. Farm production uses may take about a fourth.

Future increases in the uses of electricity will depend on several developments. The above estimates assume that service will be extended to virtually all farms in these areas; that the power will be dependable and adequate for the needs of farmers; that farm income will remain at a reasonably high level; and that technological developments will not greatly affect either the electrical equipment used or result in competing kinds of energy.

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## Outlook Highlights

... AUGUST 1950

### New Force in Economy

When the attack on South Korea occurred in late June, the United States economy was operating at near the highest levels ever attained in peace time. Output of goods by industry in June topped the previous high by 2 percent and the number of people at work was only a trifle below the record of July 1948. The construction industry continued to build at a record rate and industry was hard pressed to keep up with the demand for building

materials. Consumer income was continuing upward and prices at farm, wholesale, and retail levels were climbing.

Proposed increase in military expenditures and increased military aid to foreign countries will be a powerful new force in the economy. The President has requested approximately 10 billion dollars for military purposes and an undetermined amount for foreign military aid. Expenditures of this amount probably would result in reduced supplies of some commodities to consumers. Supplies of agricultural products, however, are likely to be ample for both civilian and military requirements.

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# Prices of Farm Products

{Estimates of average prices received by farmers at local farm markets based on reports to the Bureau of Agricultural Economics. Average of reports covering the United States weighted according to relative importance of district and State}

Commodity	5-year average		July 15, 1949	June 15, 1950	July 15, 1950	Effective parity price July 15, 1950 <sup>2</sup>
	Base period price 1910-14 <sup>1</sup>	January 1935-December 1939				
Basic commodities:						
Cotton (pound) cents	\$ 12.4	10.34	30.08	29.91	33.05	31.00
Wheat (bushel) dollars	3.884	.837	1.82	1.93	1.99	2.21
Rice (bushel) do	.591	.742	2.05	1.83	2.03	2.23
Corn (bushel) do	3.642	.691	1.25	1.36	1.44	1.60
Peanuts (pound) cents	3 4.8	3.55	10.4	10.8	10.9	12.0
Designated nonbasic commodities:						
Potatoes (lb. bushel) dollars	\$ 1.12	.717	1.54	1.27	1.27	1.75
Butterfat (pound) cents	27.7	29.1	58.9	59.7	59.4	70.9
Milk, wholesale (100 lb.) dollars	1.73	1.81	3.71	3.45	3.57	4.43
Wool (pound) cents	20.1	23.8	48.2	56.2	57.1	51.5
Other nonbasic commodities:						
Barley (bushel) dollars	3 613	.533	.957	1.12	1.15	1.47
Cottonseed (ton) do	26.30	27.52	\$ 37.50	\$ 46.20	\$ 52.00	67.30
Flaxseed (bushel) do	1.71	1.69	4 3.60	3.68	3.39	4.38
Oats (bushel) do	3.399	.310	.533	.804	.733	9.98
Rye (bushel) do	3.720	.554	1.20	1.21	1.26	1.71
Sorghum, grain (100 lb.) do	3 1.21	1.17	1.95	1.93	1.90	2.87
Soybeans (bushel) do	1.00	.954	2.27	2.50	2.53	2.56
Sweetpotatoes (bushel) do	.921	.807	2.83	2.11	2.08	2.36
Beef cattle (100 lb.) do	6.78	6.56	22.00	23.70	24.50	17.40
Chickens (pound) cents	11.4	14.9	24.3	22.1	23.4	29.2
Eggs (dozen) do	3 21.5	21.7	4 45.4	30.1	34.2	51.1
Hogs (100 lb.) dollars	7.52	8.38	18.60	17.80	21.50	19.30
Lambs (100 lb.) do	7.43	7.73	22.50	24.50	24.60	10.10
Veal calves (100 lb.) do	7.62	7.80	22.10	25.90	26.70	19.50
Oranges, on tree (box) do	5 2.29	1.11	1.93	1.85	1.22	3.57
Apples (bushel) do	1.04	.90	2.22	2.62	2.65	2.65
Hay, baled (ton) do	8.71	11.20	20.40	20.80	19.90	22.30

<sup>1</sup> Adjusted base period prices 1910-14, based on 120-month average January 1940-December 1949 unless otherwise noted.

<sup>2</sup> Parity prices are computed under the provisions of title III, subtitle A, section 301 (a) of the Agricultural Adjustment Act of 1938 as amended by the Agricultural Acts of 1948 and 1949.

<sup>3</sup> 6-month average, August 1949-July 1944. <sup>4</sup> Revised. <sup>5</sup> 10-season average 1919-28.

<sup>6</sup> Transitional parity, 95 percent of parity price computed under formula in use prior to Jan. 1, 1950.

<sup>7</sup> Preliminary.

<sup>8</sup> Relatively insignificant quantities sold for crushing this month.

## OUTLOOK HIGHLIGHTS

Continued from page 13

Authority to take measures to lessen the impact of the increased military program on the economy has been requested by the President. These include the authority to control materials and consumer credit as well as other checks on civilian demands.

### Farm Prices Reach Parity

The advance in the average of farmers' prices speeded up after the conflict began in Korea. The index of prices received by farmers gained 6½ percent from mid-June to mid-July and was almost 7 percent above a year earlier. This was the first month this year that the index topped the same month of 1949. Sharpest advances were made by hogs, cotton and eggs, but wheat, rice, corn, soybeans, cattle,

calves and chickens also made sizable gains. Main declines were registered for oats, grain sorghums, hay, flaxseed, oranges, lemons and butterfat.

Prices paid by farmers including interest, taxes and wage rates moved up a little in the June-July period and are now 2 percent above July 1949.

With prices farmers received moving up more than those they pay, farmers' prices exceeded parity in July for the first time since April 1949.

### Milk Output Tops 1949

Milk output the first half of 1950 topped the same period of last year by 2 percent, and there is a good chance that production for the whole year will set a new record.

The Korean outbreak had little effect on farmers' prices of dairy products through July. Supplies continue to ex-

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# Economic Trends Affecting Agriculture

Year and month	Industrial production (1935-39=100) <sup>1</sup>	Total income of industrial workers (1935-39=100) <sup>2</sup>	Average earnings of factory workers per worker (1910-14=100) <sup>3</sup>	Wholesale prices of all commodities (1910-14=100) <sup>4</sup>	Index numbers of prices paid by farmers (1910-14=100) <sup>4</sup>			Index numbers of prices received by farmers (1910-14=100) <sup>4</sup>			
					Commodities	Wage rates for hired farm labor <sup>5</sup>	Commodities, interest, taxes, and wage rates	Livestock and products			
								Dairy products	Poultry and eggs	Meat animals	All livestock
1910-14 average	58	50	100	100	100	100	100	100	100	100	100
1915-19 average	72	90	152	158	149	147	148	147	153	162	157
1920-24 average	75	122	221	160	159	181	168	159	163	121	140
1925-29 average	98	129	232	143	151	184	161	161	155	145	152
1930-34 average	74	78	179	107	117	121	124	105	94	83	91
1935-39 average	100	100	199	118	124	121	125	119	108	117	115
1940-44 average	192	236	315	139	148	211	152	169	145	166	162
1945 average	203	291	389	154	180	359	189	230	194	207	210
1946 average	170	276	382	177	197	387	207	267	197	248	241
1947 average	187	328	436	222	231	419	240	272	219	329	237
1948 average	192	354	472	241	250	442	259	300	235	361	314
1949 average	176	325	478	226	241	429	250	251	219	311	272
1949											
July	161	315	476	224	240	429	250	237	213	316	260
August	170	323	477	223	238	-----	249	244	225	310	271
September	174	331	486	224	238	-----	248	251	236	319	279
October	166	307	481	222	237	414	246	258	230	301	271
November	173	313	474	221	236	-----	245	261	216	286	262
December	179	325	489	221	237	-----	246	261	194	280	255
1950											
January	183	323	490	221	238	429	249	254	158	286	249
February	181	316	491	223	237	-----	248	250	155	306	257
March	187	6,335	492	223	239	-----	250	243	165	308	258
April	190	339	496	223	240	427	251	235	161	312	256
May	195	347	-----	228	244	-----	254	230	154	342	269
June	199	-----	230	6,245	-----	-----	255	227	156	342	268
July	199	-----	247	429	-----	-----	256	232	173	371	287

Year and month	Index numbers of prices received by farmers (1910-14=100) <sup>4</sup>								All crops and livestock	Parity ratio <sup>4,3</sup>		
	Crops											
	Food grains	Feed grains and hay	To-bacco	Cotton	Oil-bearing crops	Fruit	Truck crops	All crops				
1910-14 average	100	100	100	100	100	100	-----	100	100	100		
1915-19 average	193	161	183	175	201	126	-----	171	164	111		
1920-24 average	147	125	189	197	155	157	152	162	150	89		
1925-29 average	141	118	169	150	135	146	145	143	148	92		
1930-34 average	70	76	117	77	78	98	104	84	88	71		
1935-39 average	94	95	172	87	113	95	95	99	107	86		
1940-44 average	123	119	241	138	170	150	164	145	154	101		
1945 average	172	161	360	178	228	244	207	203	206	109		
1946 average	201	196	376	237	260	250	182	227	234	113		
1947 average	270	249	374	272	363	212	226	263	275	115		
1948 average	250	250	380	270	351	174	214	252	285	110		
1949 average	219	170	398	245	242	199	201	223	249	100		
1949	209	171	404	253	219	217	168	221	246	98		
July	205	165	400	246	241	181	170	214	244	98		
August	211	166	393	250	227	160	188	212	247	100		
September	213	161	396	241	221	180	174	210	242	98		
October	215	157	369	233	220	172	213	210	237	97		
November	219	168	394	223	225	174	196	210	233	95		
December	219	170	387	278	267	211	200	236	263	103		
1950	218	170	382	222	228	185	261	219	235	94		
January	219	171	389	231	228	186	203	215	237	96		
February	224	174	389	236	230	193	168	215	237	95		
March	227	181	389	242	239	206	205	225	241	96		
April	230	190	387	246	248	195	178	223	247	97		
May	218	190	388	251	254	207	182	225	247	97		
June	226	195	387	278	267	211	200	236	263	103		

<sup>1</sup> Federal Reserve Board: represents output of mining and manufacturing; monthly data adjusted for seasonal variation.

<sup>2</sup> Computed from data furnished by Bureau of Labor Statistics and Interstate Commerce Commission on pay rolls in mining, manufacturing, and transportation; monthly data adjusted for seasonal variation. Revised January 1950. <sup>3</sup> Bureau of Labor Statistics.

<sup>4</sup> Revised January 1950. <sup>5</sup> Farm wage rates simple averages of quarterly data, seasonally adjusted.

<sup>6</sup> Revised. <sup>7</sup> Preliminary.

<sup>8</sup> Ratio of index of prices received to index of prices paid, interest, taxes, and wage rates. This parity ratio will not necessarily be identical to a weighted average percent of parity for all farm products, largely because parity prices for some products are on a transitional basis. <sup>9</sup> 1924 only.

## CUTLOOK HIGHLIGHTS

Continued from page 14

ceed consumer and private storage demands and the surplus has been moving into Government stocks.

### More Meat This Fall

When the seasonal increase in marketings of meat animals begins late this summer or early next fall, production of meat is likely to top the level of a year earlier.

Most of the gain over the final quarter of 1949 will be in pork and the better grades of beef. Output of lower grades of beef is expected to be about the same as a year earlier while production of veal, lamb and mutton are expected to be down.

### Egg Prices Up Sharply

The conflict in Korea is not expected to have much effect on poultry and egg production until farmers complete the production cycle now under way. This means that market supplies of broilers will not be affected for 4 or 5 months; that eggs will not show much response for about a year. In the meantime, part of any increase in military demand could be met from surplus stocks.

Egg prices rose 4.1 cents from mid-June to mid-July, the sharpest increase for the period on record. Egg production is running 5 percent above a year ago and cold storage stocks are much larger.

Poultry meat supplies this fall are expected to be larger than a year ago. Because of strong demand in prospect, however, prices may stay near July levels.

### Cotton Use Large

Total use of cotton during the 1949-50 season which ends August 1 is expected to be the largest in a decade. Exports through May ran 19 percent above a year earlier and for the season are expected to total 16 percent above 1948-49. Use of cotton by domestic mills is expected to be 12 to 15 percent above last season.

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